

## ABSTRACT

A system and a method for encoding and decoding ultra-wideband information are provided. An ultra-wideband transmission is encoded by positioning bipolar pulse pairs. The bipolar pulse pairs assist in detecting errors in the ultra-wideband transmission, before the entire transmission has been received. The transmission is analyzed for errors and an error rate is calculated. The calculated error rate is compared to one or more predefined acceptable error rate levels to determine whether the calculated error rate of the transmission is within at least one of the predefined acceptable error rate levels.

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